

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A conveyor belt assembly for conveying an object to be portioned by a fluid jet, comprising a conveyor belt formed from at least a first and a second picket each having a length comprised of a sequence of geometrically shaped links disposed transversely across the conveyor belt, wherein the pickets are disposed in a nested relationship to each other, the pickets comprising upper edge portions that cooperatively form a conveying surface for supporting and advancing the object to be portioned, wherein the upper edge portion lengthwise of the pickets is tapered in the upward direction to reduce dispersion of the fluid jet during impingement of the fluid jet on the conveying surface.

2. The conveyor belt assembly of Claim 1, wherein the first picket is pivotally attached to the second picket by a rod inserted through at least one link of the first picket and at least one link of the second picket.

3. The conveyor belt assembly of Claim 1, wherein the links comprising the first and second pickets have a leading end portion of a first shape and a trailing end portion of a second shape, wherein the leading end portions of the links of the first picket may at least be partially received within the trailing end portions of the links of the second picket, thereby allowing the first picket to be at least partially nested within the second picket.

4. The conveyor belt assembly of Claim 3, wherein the leading end portions and the trailing end portions of the links have apertures, wherein the first picket can be pivotally coupled in a nested relationship to the second picket by aligning the apertures and inserting a rod therethrough.

5. The conveyor belt assembly of Claim 1, wherein the pickets are comprised of a sequence of geometrically shaped links selected from a group consisting of triangular shaped links, quadrilateral shaped links, curved shaped links, saw tooth shaped links, and sinusoidal shaped links.

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6. The conveyor belt assembly of Claim 1, further comprising a first drive chain and a second drive chain, wherein the first drive chain is positioned along a first side of the conveyor belt and the second drive chain along a second side of the conveyor belt, wherein the drive chains are coupled to the conveying surface and can be driven to impart motion to the conveying surface.

7. The conveyor belt assembly of Claim 6, wherein the first and the second drive chains have a plurality of apertures, wherein a connecting rod can be inserted through the apertures and at least one of the links of the pickets, thereby pivotally coupling the pickets to the first drive chain and the second drive chain.

8. The conveyor belt assembly of Claim 7, wherein the plurality of apertures are spaced a predetermined distance from one another along a length of the first and second drive chains, thereby substantially uniformly spacing adjacent pickets from one another.

9. The conveyor belt assembly of Claim 1, wherein the upper edge portions of the pickets are linearly tapered.

10. The conveyor belt assembly of Claim 1, wherein the upper edge portions of the pickets are roundly tapered.

11. The conveyor belt assembly of Claim 1, wherein the upper edge portions of the pickets are concavely tapered.

12. The conveyor belt assembly of Claim 1, wherein the upper edge portions of the pickets are convexly tapered.

13. The conveyor belt assembly of Claim 1, wherein the upper edge portions of the pickets are step tapered.

14. The conveyor belt assembly of Claim 1, wherein the upper edge portions of the pickets are tapered on one side.

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15. The conveyor belt assembly of Claim 1, wherein the upper edge portions of the pickets are tapered along a portion of the height of the pickets.

16. A conveyor belt assembly for conveying an object to be portioned by a fluid jet, comprising a conveyor belt formed from a plurality of pickets, each having a length comprised of a sequence of geometrically shaped links disposed transversely across the conveyor belt, the pickets comprising upper edge portions that cooperatively form a conveying surface for supporting and advancing the object to be portioned, wherein the upper edge portions lengthwise of the picket are tapered in the upward direction to reduce dispersion and splash back of the fluid jet during impingement of the fluid jet on the conveying surface.

17. The conveyor belt assembly of Claim 16, wherein the pickets are disposed in a nested relationship to each other.

18. The conveyor belt assembly of Claim 16, wherein adjacent pickets are pivotally attached to each other by a rod inserted through adjacent links of the adjacent pickets.

19. The conveyor belt assembly of Claim 16, wherein the links comprising the plurality of pickets have a leading end portion of a first shape and a trailing end portion of a second shape, wherein the leading end portions of the links of a first picket may at least be partially received within the trailing end portions of the links of a second picket, thereby allowing the first picket to be at least partially nested within the second picket.

20. The conveyor belt assembly of Claim 19, wherein the leading end portions and the trailing end portions of the links have apertures, wherein the first picket can be pivotally coupled in a nested relationship to the second picket by aligning the apertures and inserting a rod therethrough.

21. The conveyor belt assembly of Claim 16, wherein the pickets are comprised of a sequence of geometrically shaped links selected from a group consisting of triangular shaped links, quadrilateral shaped links, curved shaped links, saw tooth shaped links, and sinusoidal shaped links.

22. The conveyor belt assembly of Claim 16, further comprising a first drive chain and a second drive chain, wherein the first drive chain is positioned along a first side of the conveyor belt and the second drive chain along a second side of the conveyor belt, wherein the drive chains are coupled to the conveying surface and can be driven to impart motion to the conveying surface.

23. The conveyor belt assembly of Claim 22, wherein the first and the second drive chains have a plurality of apertures, wherein the connecting rods extend through said apertures and at least one of the links of the pickets, thereby pivotally coupling the pickets to the first drive chain and the second drive chain.

24. The conveyor belt assembly of Claim 23, wherein the plurality of apertures are spaced a predetermined distance from one another along a length of the first and second drive chains, thereby substantially uniformly spacing adjacent pickets from one another.

25. The conveyor belt assembly of Claim 16, wherein the tapering of the upper edge portions of the links is accomplished by a method selected from the group of linear tapering, rounded tapering, concave tapering, convex tapering, stepped tapering, tapering on one side of the links, tapering along the entire height of the links, and tapering along a portion of the height of the links.

26. A conveyor belt assembly for conveying an object to be portioned by a fluid jet, comprising a first drive chain and a second drive chain, wherein the first drive chain is positioned along a first side of the conveyor belt and the second drive chain along a second side of the conveyor belt, wherein the first and second drive chains are coupled to a conveying surface and can be driven to impart motion to the conveying surface; and

wherein the conveying surface is comprised of a plurality of pickets, each having a length comprised of a sequence of geometrically shaped links disposed transversely across the conveyor belt between the first and second drive chains, the pickets comprising upper edge portions that form the conveying surface for supporting and advancing the object to be portioned, wherein the upper edge portions lengthwise of the picket are

tapered in the upward direction to reduce dispersion and splash back of the fluid jet during impingement of the fluid jet on the conveying surface.

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